DOCUMENT RESUME

ED 139 924 CE 010 899

AUTHOR Adams, Kay A.; And Others
TITLE Vocational Education Program Need in Large Cities.
INSTITUTION Ohio State Univ., Columbus. Center for Vocational Education.
SPONS AGENCY Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.
PUB DATE 77
NOTE 56p.

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS Administrator Attitudes; Demography; Educational Assessment; *Educational Needs; Educational Problems; Geographic Regions; Minority Groups; National Surveys; Needs Assessment; Program Evaluation; *Urban Areas; *Urban Education; Vocational Directors; *Vocational Education
IDENTIFIERS United States

ABSTRACT

A national study of the vocational education programs in 164 large cities was conducted to explore perceived needs; determine the priority of these needs; and compare the priorities in terms of city size, geographic location, and minority concentration. Data was collected through interviews, a mail survey, and a literature review. After the needs were identified, they were divided into 30 "major goal" statements and 260 "specific need" statements to be prioritized by urban educators. The six highest priorities related to an adequate and equitable funding base, vocational guidance, relevance of vocational content, basic academic instruction, vocational student job placement, and community relations and support. Many of the specific needs related to the highest major goals. As an example of the unique priorities according to type of city, the need for up-to-date equipment was considered stronger in medium and small cities than in large cities, higher in the Northeast than in other regions of the country, and greater in high minority cities than in either medium or low minority cities. A number of recommendations directed to audiences at the local, State, and national levels were made. A list of the cities included in the mail survey and selected results from personal interviews are appended. (LMS)

**********
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
**********

ED139924

# VOCATIONAL EDUCATION

# PROGRAM NEED IN LARGE CITIES

by

Kay A. Adams

Stanley B. Cohen

Daniel E. Koble, Jr.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

The Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

1977

CE 010 859

## FOREWORD

The results of this national study provide a valuable information base about high priority needs in urban vocational education programs. The Center for Vocational Education recognizes the importance of using the results of this study to systematically address the highest priorities, such as a funding base for cities, vocational guidance, relevance of vocational content, basic academic instruction for vocational students, job placement, and community relations and support.

The design and implementation of the study has relied upon the help and cooperation of a great many persons. In particular, I would like to thank Kay A. Adams and Daniel E. Koble, Jr. for conceptualizing and conducting the study. Special recognition is due Stanley Cohen, Director of Vocational Education in Philadelphia, Pennsylvania for considerable editing of this manuscript. Additional appreciation is extended to the thirty staff members at CVE who reviewed the survey instruments at some point in the development process; to Marlene Linton and Youngja Yum for excellent typing of the manuscript and to Lynn Malowney and Mark Newton for final editing.

The study was strengthened by the support of Benjamin Whitten, Executive Director of Vocational Education in Baltimore, Maryland and the National Association of Large City Directors of Vocational Education. Special thanks is extended to all the large city directors of vocational education and their staffs who provided valuable information about their city's needs by completing the survey instruments. The contribution of many of the city directors in reviewing draft versions of the instruments and supporting the study to their constituents has been invaluable. Especially appreciated was the candid advice of Fred Ricketts, Director of Practical Education in Columbus, Ohio and Donald V. Healas, Director of Technical-Vocational Education in Cleveland, Ohio in the beginning stage of the study.

Robert E. Taylor, Director
The Center for Vocational Education

## THE CENTER MISSION STATEMENT

The Center for Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

The material in this publication was funded by an Education Professional Development Act (EPDA), Part F, Section 553 Grant, administered through the Vocational Education Personnel Development Division, BOAE/USOE, Region V Office, USOE, and the Division of Vocational Education of the Ohio State Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view do not, therefore, necessarily represent official BOAE, USOE, or state of Ohio position or policy.

## PREFACE

Needs assessment provides the foundation for any well planned change. Thus, identifying needs is important if planning the future of vocational education in the large cities of America is to be meaningful and profitable. The range and scope of identified needs must be internalized by the various segments of the community that are involved in the educational process.

As elucidated in this study, there are serious and unresolved needs in large city vocational education programs. The resources of the great cities, both financial and human, have not been adequate to resolve the difficulties that increase rather than diminish. An important first step to meeting these needs systematically is the creation of a national information base. The major questions that need to be answered are:

1. What are the needs for vocational education programs in large cities?

2. What is the relative priority of these needs as perceived by urban vocational educators?

3. How do the vocational education priorities of large cities differ according to their size, geographic location, and minority composition?

These questions have been answered by this study. It is now incumbent upon the local directors of vocational education to stimulate the use of these data at the local, state, and national levels. A master plan is needed to bring about changes in curriculum, instructional improvement, personnel development, relevant research and evaluation, and increased funding for vocational education in the large cities of America.

As a local administrator of vocational education, I am convinced that some of the problems we are experiencing in vocational education can be solved by following the recommendations set forth in this study. The study most certainly will be useful in communicating the needs of large urban programs to significant others. This document should be placed in the hands of state vocational education leaders, senators, congressmen, state legislators, local board of education members, superintendents, academic supervisors, home and school associations, business and industry leaders, teacher educators, and the vocational education staffs in the large cities.

It is incumbent upon the local administrator of vocational education to make known the felt needs of vocational educators as well as the recommendations for future action. This information, in the hands of public officials, advisory groups, and the community holds the capacity of producing the power base to generate sound change.

Stanley B. Cohen
Director of Vocational Education
School District of Philadelphia
March 1977

## TABLE OF CONTENTS


Foreword . . . . . iii

Preface . . . . . v

Summary . . . . . ix

I. Can Big City Vocational Education Programs Survive? . . . . . 1

The Past Ten Years . . . . . 2
The Problem . . . . . 3

II. The Study . . . . . 5

Purpose . . . . . 5
Population . . . . . 6
Definition of Terms . . . . . 6
The Needs Assessment Approach . . . . . 6
Research Methods . . . . . 8
Exploration of the Needs . . . . . 8
Synthesis of the Needs . . . . . 14
Rating the Priority of the Needs . . . . . 14
Validity and Reliability of the Instruments . . . . . 15
Data Analysis . . . . . 16

III. National Priorities . . . . . 19

Major Goal Priorities . . . . . 19
Specific Need Priorities . . . . . 23
Relationship Between the Major Goal and Specific Need Priorities . . . . . 30
Some Conclusions about the National Priorities in Large Cities . . . . . 32

IV. Unique Priorities . . . . . 33

Priorities by City Size . . . . . 33
Priorities by Geographic Location . . . . . 35
Priorities by Minority Concentration . . . . . 38
Summary of the Unique Priorities . . . . . 40

V. Use of the Results . . . . . 41

Bibliography . . . . . 43

Appendix: Population of Large Cities for the Mail Surveys . . . . . 45

What the People Say: Selected Results from Personal Interviews . . . . . 46

## LIST OF TABLES AND FIGURES

### Tables


1. Stages of the National Large Cities Vocational Education Needs Study . . . . . 9
2. Higher Priority Goals for Vocational Education in Large Cities as Perceived by City Directors . . . . . 20
3. Medium Priority Goals for Vocational Education in Large Cities Perceived by City Directors . . . . . 21
4. Lower Priority Goals for Vocational Education in Large Cities as Perceived by City Directors . . . . . 22
5. Higher Needs for Vocational Education in Large Cities as Perceived by District Level Personnel . . . . . 24
6. Medium High Needs for Vocational Education in Large Cities as Perceived by District Level Personnel . . . . . 25
7. Medium Needs for Vocational Education in Large Cities as Perceived by District Level Personnel . . . . . 26
8. Medium Low Needs for Vocational Education in Large Cities as Perceived by District Level Personnel . . . . . 27
9. Lower Needs for Vocational Education in Large Cities as Perceived by District Level Personnel . . . . . 28
10. Comparison of the Rankings of Thirty Major Goals and Thirty Specific Need Clusters . . . . . 31
11. Ranks of Major Goals in Cities of Different Size . . . . . 34
12. Ranks of Major Goals in Cities in Different Geographic Locations . . . . . 36
13. Ranks of Major Goals in Cities with Different Minority Concentration . . . . . 39


### Figures


1. Classification of States into Four Geographic Regions . . . . . 17

## SUMMARY

A national study of the vocational education programs in cities with populations exceeding 100,000 was conducted to: (1) explore perceived needs through personal interviews, an open-ended mail survey, and literature review; (2) determine the relative national priority of these needs by ratings from city directors of vocational education and their staffs; and (3) compare the need priorities in terms of city size, geographic location and minority concentration to determine if different types of cities have unique needs.

The following recommendations, based upon the findings of the study, are directed to audiences at the local, state, and national levels.

National and State Recommendations

1. Federal funding priorities for vocational education should be reexamined in light of the priorities identified. Three high priority goal areas seem especially pertinent for federal considerations: vocational guidance, basic academic instruction for vocational students, and community relations, especially education and manpower coordination. Although federally sponsored programs are in operation for each of these areas, there are strong indications of a need for more assistance.

2. The current procedures followed for allocating resources to large urban areas should be reassessed. The top priority goal area and many of the highest ranked specific needs concern the funding base for urban vocational education.

3. At the state and federal levels, the results of the study should be used as a basis for gaining increased insight into local practioners' perceptions of their needs.

4. The higher priority goals and needs should be examined for their research and development implications for laboratories, centers, and research coordinating units.

5. The higher priority goals and needs identified through this study should be examined by national professional associations for their implications. It is strongly urged that groups, such as the National Association for Large City Directors of Vocational Education, the American Vocational Association, and the National Advisory Council for Vocational Education lobby for, communicate to constituents, and give their support to programs which meet the priority needs identified.

6. Planners of professional development activities for vocational personnel should examine and interpret the findings of the study for their implications. Some priority areas for preservice and in-service programs which were identified: preparation of counselors in vocational guidance; new and innovative approaches to vocational education; industry based exploratory programs for vocational teachers; coordination between vocational and academic teachers, public information techniques; serving students with special needs; helping teachers instruct academically deficient vocational students; improving vocational leaders skills in long-range planning, evaluation, needs assessment, and program management; using follow-up information to improve programs; and maintaining current information on career opportunities and job practices.

Local Recommendations

7. At the local urban school district level, the results of the study can be used as a basis for collecting more in-depth information about local vocational needs. The specific need statements can be used as criteria for evaluating local programs. For example, local programs can be evaluated as to the extent:

   - parents of school age children in the community are aware of vocational education programs,
   - students receive counseling at enrollment,
   - counselor time is spent with vocational students,
   - coordination between vocational and academic curricula is occurring,
   - student absenteeism and tardiness is reduced.

8. Local urban school districts are encouraged to use the results of the study to communicate a more factual and compelling picture of their own needs as compared to national needs to constituents at the local, state, and national levels. The instruments used in this study also can be administered at the local level to assess needs. Both the general goal and specific need statements should prove useful for developing local program objectives, preparing long-range planning documents, and responding to requests for proposals.

9. At the local school district and school building level, it is recommended that the results be used as a stimulus for discussion and planning. Task forces or other planning groups can build on the higher priority needs and goals to develop action plans for upgrading, expanding, or initiating programs.

General Recommendations

10. The quality and delivery of vocational guidance services to students should be improved. Systematic procedures for counseling vocational students prior to their enrollment to help them select the right program are needed. Programs which help students develop positive work habits and attitudes should be developed. Well rounded aptitude and interest testing programs should be initiated.

11. Public information and community involvement programs are needed to help vocational educators communicate with their constituents, sponsors, and peers in the educational, manpower, and general communities. Programs are needed for increasing: parental awareness of vocational education opportunities as compared to college; federal and state awareness of urban vocational education needs; the use of vocational students as employees by business and industry; middle and high school students' awareness of vocational education opportunities; the general publics' awareness of vocational education; and general educators' awareness of vocational education.

12. The basic academic instruction received by vocational students needs to be upgraded. This can be accomplished, in part, through: increasing coordination between vocational and academic curricula and teachers; improving methods for diagnosing students' remedial academic needs, developing curriculum materials in math and English geared to vocations, and assisting vocational teachers to instruct academically deficient students.

## I. CAN BIG CITY VOCATIONAL EDUCATION PROGRAMS SURVIVE?

Large cities are an integral part of the American experience and heritage. Today's cities, although often tarnished by a myriad of urban blights, are still the centers of finance, commerce, and government; the focal points for the arts; and the homes of eminent universities and research hospitals.

The popular media do not let us forget about big cities and their problems. High unemployment, increasing crime rates, diminishing tax bases, and population shifts are some of the social and economic problems burdening many cities (*U.S. News & World Report,* 1975, 1976; *Time,* 1975).

The social and economic problems in large cities directly and constantly affect the quality of education in many urban schools. Urban schools typically have higher costs for the delivery of services, larger classes, and a more diversified group of clients to serve than rural or suburban schools. Urban schools appear to be plagued by more disruptive activities, such as teacher strikes, court ordered desegregation, drastic budget cuts, and crime and vandalism, than their rural and suburban counterparts.

The vocational education programs located in big cities are even more dramatically affected by an urban location. Urban vocational education programs tend to house a higher percentage of disadvantaged and minority students than academic programs in the same location. Yet, the extent to which education programs are actually affected by their urban location is still unknown. The degree to which needs are common to many large cities or are unique and varied has likewise been unknown. Preconceived ideas about education in urban areas abound. Some commonly held conceptions may be misconceptions. For example:

1. Inner-city vocational facilities are extremely old and poorly maintained.
2. Equipment in these facilities is antiquated and inadequately maintained.
3. Vocational education personnel in inner-cities tend to be less than adequate.
4. Student control problems are different from and more intense than those encountered in rural or suburban areas.
5. The placement of persons for cooperative work experience or employment is less difficult in large urban areas.
6. Parents and other laymen are not concerned about education.
7. Security against personal and/or property crimes is difficult.
8. Vocational education programs in the urban areas are primarily designed to meet the needs of delinquent and pre-delinquent students.

## The Past Ten Years

A review of the past decade illustrates a growing concern about vocational education in urban areas. Below a ten year retrospective on large city vocational education is highlighted by year.

| Year | Activity |
|---|---|
| 1966 | Research training institute on Priority Problems in Vocational Education for the Nation's Big Cities is held in Denver, Colorado (The Center for Vocational Education, 1966). |
| 1968 | Council of the Great Cities Schools prepares a position paper entitled *Occupational Education in the Great Cities.* |
| 1969 | A seminar on "The Scope and Responsibilities of Vocational Education in Large Cities" is held in Cleveland, Ohio (Mason, 1969). |
| 1970 | A series of twenty institutes sponsored by USOE are held for vocational education personnel in eastern and western metropolitan areas (Olivo, 1969; Blake, 1972). |
| 1972 | A brief analysis of Vocational Education in Major Cities comparing census and budget data from forty-five cities is made (Bureau of Adult, Vocational, and Technical Education, 1972). |
| 1972 | The American Vocational Association forms a task force to work on urban problems. |
| 1974 | Two workshops for vocational administrators in large urban areas are sponsored by the Washington, D.C. Public Schools. |
| 1974 | The National Association of Large City Directors of Vocational Education forms to address big city concerns. |
| 1974 | The National Advisory Council for Vocational Education holds hearings in five large cities to identify needs. |
| 1975 | The National Association of State Directors of Vocational Education prepares working papers on "The Role of Vocational Education in Large Cities" (Bins, Healas, Hobbs, 1975). |
| 1976 | A Leadership Development Seminar for Large City Directors of Vocational Education is conducted by The Center for Vocational Education. |
| 1976 | A national survey on research and development needs in vocational education is initiated by The Center for Vocational Education. Large cities' personnel are included in the sampling frame (Morrison, 1976). |
| 1976 | The National Lay Cities Vocational Education Needs Study is initiated by The Center for Vocational Education (Adams, 1976). |

1977 The third national seminar for Large City Directors of Vocational Education is held in Washington, D.C. (The Center for Vocational Education, 1977).

The increasing interest in large city vocational programs has grown out of the viewpoint that large cities have unique needs. Three national organizations have been formed to work on major vocational education problems in urban areas. Several national conferences and studies have focused directly on the problems and needs affecting vocational education in large cities.

## The Problem

There is a need to separate myth from reality concerning current conditions in urban vocational education programs. There are serious and unresolved needs in large city vocational education programs. The resources of many cities, both financial and human, have not been adequate to resolve the difficulties that increase rather than diminish. An important first step to systematically meeting needs is the creation of a national information base. The National Large Cities Vocational Education Needs Study (Adams, 1976) was undertaken to answer three major questions:

1. What are the perceived needs for vocational education programs in large cities?

2. What is the relative priority of these needs as perceived by urban vocational educators?

3. How do the vocational education priorities of cities differ by their size, geographic location, and minority composition?

## II. THE STUDY

### Purpose

The specific objectives of the National Large Cities Vocational Education Needs Study were:

1. To petition information about major needs in large city vocational education programs from central office staffs for vocational education (directors, supervisors, and coordinators) in 160 large cities through an open-ended mail survey.

2. To petition information about major needs in large city vocational education programs through in-depth personal interviews with representative members from both the educational and manpower communities in fourteen major urban areas.

3. To review current literature on urban education, vocational education, and urban vocational education to determine needs.

4. To compile, edit, and summarize the information from these three sources (mail surveys, personal interviews, and literature reviews) into a composite list of statements indicating major needs.

5. To organize the statements by content into related sets of specific need statements headed by more general major goal statements.

6. To determine the relative national priority of the major goals for urban vocational education programs as viewed by the directors of vocational education in large cities.

7. To determine the relative degree of need of the more specific statements about needs in urban vocational education programs for the nation as viewed by central office staff (directors, supervisors, and coordinators) in large city school systems.

8. To describe the differences in the expressed priorities for vocational education programs among larger (more than 500,000 residents), medium (200,000 - 500,000 residents), and smaller (less than 200,000 residents) cities.

9. To describe the differences in the expressed priorities for vocational education programs among cities in four geographic areas of the United States: Northeast, North Central, West, and South.

10. To describe the differences in the expressed priorities for vocational education programs among cities with higher (over 30 percent), medium (between 15 and 30 percent), and lower (less than 15 percent) concentrations of minorities.

## Population

The population for the study was large cities which includes all cities with more than 100,000 residents as identified in the 1970 census and the largest city in states that do not have a city with at least 100,000 residents. In 1970, there were 153 cities with more than 100,000 residents and 11 states that did not have a city this large. This brought the total number of cities in the study to 164.

## Definition of Terms

The key terms used in the study are defined as follows:

City Director of Vocational Education: The individual in charge of public vocational education programs for a school district in a city with more than 100,000 population.

Large City: A location in the United States with more than 100,000 inhabitants as identified in the 1970 census and the largest city in states without a city of over 100,000.

Need: A measurable discrepancy between current educational outcomes and desired or required outcomes; or the discrepancy between "what is" and "what ought to be" (Kaufman, 1968).

## The Needs Assessment Approach

The needs assessment approach used in this study is a modification of a popular approach originated by Kaufman (1968) called "discrepancy analysis." In discrepancy analysis, measuring a need requires at least three steps: (1) determining the current outcomes of educational programs or "what is," (2) determining the desired or required outcomes or "what should be," and (3) determining the amount of discrepancy between current and desired outcomes. Other researchers have added a fourth step, rating the importance of reducing each discrepancy (Lange, 1974).

The basic approach to needs assessment used in this study has attempted to overcome some of the general disadvantages and weaknesses inherent in most approaches to needs assessment. For example:

1. Needs assessments often result in a list of general educational goals in priority order. The goals are often so general that they do not provide sufficient direction for follow-up action.

2. If ratings of goals are collected from several groups of individuals (parents, students, and educators for example), the results from each group frequently differ widely. Overall results consequently are often unclear with one group cancelling out another.

3. If goals are rated on a five point scale, the means for most of the goals tend to end up in a fairly narrow middle range from 2.5 to 3.5. This makes it difficult and arbitrary to distinguish the relative priority of the goals.

To overcome some of these weaknesses the steps for measuring needs in this study were: (1) determining major problems, (2) determining major goals, (3) developing need statements based on discrepancies between problems and goals, and (4) determining the relative degree of need of the set of needs. Some unique features of the approach used in this study are: (1) maximum involvement of respondents in developing need statements, (2) delimiting the focus of the study at the outset to major problem areas, (3) collecting both general and specific information about needs, and (4) using only one scale to measure the relative priority of needs.

Maximum Involvement

Maximum involvement from urban vocational educators, students, and citizens was sought in the development of need statements. Open-ended surveys and personal interviews were used to explore important problems and goals for urban vocational education. An interactive approach for developing need statements was used because: (1) an accurate and comprehensive literature base on needs in urban vocational education was not available, and (2) participant involvement would facilitate use of the study's results by maximizing the legitimacy and usability of the results for urban vocational educators.

Delimiting the Focus to Major Problems

Rather than collecting information about needs in all aspects of urban vocational education, a sequential elimination process was used to delimit the need statements to high priority areas. In the exploration stage of the study, practicing vocational educators were asked to provide information only about those problems perceived as highest priority. After the initial need statements were developed, a group of fifty-two reviewers, including large city directors, research specialists in vocational education, and graduate students, were asked to review and eliminate statements which did not reflect high priority concerns.

Collecting Both General and Specific Information about Needs

Typically, needs assessments provide information about only very general goals of education. In this study, information was collected about both general and specific areas of need. The specific information about needs can be translated more easily into action. The general information can be used for major policy and funding decisions. This increases the potential utility of the information.

Using One Scale

After major goal and specific need statements were developed using descriptive information about major problems and goals, their relative priority was assessed using only one scale. Other discrepancy analyses approaches to needs assessment typically use two rating scales, one scale to rate the "what is" dimension and one scale to rate the "what should be" dimension.

One rating scale was viewed as the optimal approach for this study for the following reasons.

1. The instrument is easier and quicker for respondents to complete. Since the instruments used in this study were long, a simplified rating procedure was essential for maximizing the return rate and limiting unreliable results from instrument fatigue and response sets.

2. Through a feasibility study, it was discovered that respondents found two rating scales frustrating. Many felt unqualified to rate the "what is" dimension and tended to give all the needs the highest possible rating on the "what should be" dimension.

3. One rating scale may actually provide more reliable information since discrepancy scores tend to magnify any existing measurement error

4. Data analysis and reporting of results are simplified.

5. Recent research (Jenkins, 1975) has shown a high correlation between the ranking pattern of needs using the discrepancy approach and the patterns resulting when only the "what should be" dimension is used.

## Research Methods

Survey research was selected as the most appropriate methodology for the study since the study was national in scope and information was collected throughout the United States. The primary data gathering techniques were two sequential mail out surveys and personal interviews in selected large cities. The study is comprised of three stages which are summarized in Table 1.

1. Exploration of the Needs

2. Synthesis of the Needs

3. Rating the Priority of the Needs

## Exploration of the Needs

During the exploration of the needs, three methods were used to generate information: (1) an open-ended mail survey, (2) personal interviews, and (3) review of the literature.

### Open-ended Mail Survey

An open-ended mail survey was developed to obtain firsthand perceptions of major needs from urban vocational educators. The open-ended survey asked urban vocational educators to describe their major problems and recommend goals for meeting these problems.

The instructions defined a problem as any situation in which current activities are seriously lacking in either scope or quality to adequately meet the needs of students. A goal was defined as the desired state of affairs for each problem situation. Example problem and goal statements were provided. The open-ended instrument was divided into twelve pages—one for each of the areas listed below.

1. Secondary Vocational Educa[illegible]

2. Post-secondary Vocational Education

3. Part-time Adult Education

4. Curriculum and Instruction

**Table 1**

**Stages of the National Large Cities Vocational Education Needs Study**

| Stage | Description of the Activities | Outcome |
|---|---|---|
| Exploration of the Needs | Three techniques were used to explore the critical needs in urban vocational education programs. Personal interviews were conducted with representative groups from the educational and manpower communities in fourteen large cities. An open-ended mail survey was sent to district level vocational personnel in 160 large cities. Key documents from the literature were reviewed. | Over 6,000 statements of problems and goals for resolving them were generated for 12 areas of vocational education. |
| Review and Synthesis of the Needs | The statements were categorized by content. The more specific needs were clustered together under the more general statements to provide an overall conceptual organization. Repetitive statements were combined or eliminated. Statements were edited and rewritten so that all statements were expressed similarly. | Statements were reduced to 30 major goals and 260 more specific needs relating to these goals. The statements were organized under four areas of vocational education: curriculum and instruction, administration, personnel, and guidance and counseling. |
| Rating the Priority of the Needs | A packet of five mail out survey instruments were developed to rate the relative priority of the goals and needs which emerged from the synthesis process. District level vocational personnel in 160 large cities were asked to rate the priority of the goals and needs. Of those surveyed, 70 percent responded. | A priority listing of the major goals and specific needs for urban vocational education programs resulted. |

5. Guidance, Counseling, and Other Student Services

6. Job Placement and Follow-up

7. Administrative Services

8. Supervisory Services

9. Facilities, Equipment, Supplies, and Transportation

10. Personnel

11. Community Relations

12. Social Problems and Special Students (economically and/or socially disadvantaged, ethnic minorities, the physically, mentally, or emotionally handicapped, unemployed or underemployed city dwellers, the retired, veterans, returnees from correctional institutions, and males and females in untraditional vocational fields)

The directors of vocational education in 160 large cities were asked to work with other personnel in their school districts to list their major problems and goals in the twelve areas outlined above. Fifty of the 160 cities surveyed responded, including almost 70 percent of the thirty largest cities in the United States.

Personal Interviews

In addition to the open-ended survey, personal interviews were used to help identify needs. These interviews were conducted in the fall of 1975 with representative groups in fourteen major urban areas: New York City, Washington, Baltimore, Dallas, Detroit, Milwaukee, Indianapolis, Minneapolis, Denver, Omaha, Madison, Fargo, Houston, and Los Angeles. A random sample of ten cities was selected from the largest twenty-five cities in the United States for conducting personal interviews. Personal interviews also were conducted in four other large cities which were selected because travel to the cities for another purpose eliminated travel costs.

These interviews were conducted to obtain in-depth information about major needs from many different viewpoints. Those interviewed included vocational students, teachers, counselors, coordinators, and principals in local schools and centers; central office directors, supervisors, and coordinators at the district level; and in the community, members of the mayor's manpower staff, manpower training personnel, social service personnel, private and state job placement personnel, local employers, representatives of labor, concerned citizens, and parents. Most of the interviews were held in small groups of three to eight people.

Eight separate interview schedules were developed for conducting interviews with the various groups. Interview schedules were flexible, and questions were not asked verbatim but were frequently modified to fit the situation.

In most of the cities, two eight-hour days were scheduled for interviews while a third day was spent observing selected vocational programs in operation. Vocational programs in approximately sixty facilities were observed, including vocational programs sponsored by junior high schools, comprehensive senior high schools, vocational education schools, post-secondary institutions, community technical colleges, programs sponsored by the Comprehensive Education Training Act (CETA), and local adult education centers.

The interviewers took notes to highlight the responses of those being interviewed. At the end of the series of interviews in each city, a tape was prepared summarizing the major needs expressed by those interviewed or observed by the interviewer. These tapes subsequently were transcribed and used as a basis for developing need statements.

Finding Needs in Current Literature

To supplement the needs identified by practicing vocational educators, several key documents from the literature were reviewed. Primary among these documents were: (1) the expressed priorities for research in vocational education of the Office of Education for the past two years, (2) the expressed priorities of The Center for Vocational Education, and (3) needs which had been identified by other studies, position papers, and training activities in urban vocational education, vocational education, and urban education.

Urban Vocational Education Needs. Two national agencies have directly studied urban vocational education needs. In hearings held by the National Advisory Council for Vocational Education in five large cities, several concerns that were common across all five cities were identified (*Report on Urban Education,* 1974). For example:

1. There is a great need to expand vocational education in major cities. The demand for trained people in specified fields with special abilities to communicate with inner-urban students is greater than can be met with current faculty and facilities.

2. This expansion and improvement of center-city vocational programs requires increased funding.

3. There is a need to build more relevance into vocational courses. Too many students are trained in fields where there are few jobs, and the system is too slow in updating course content and adding courses in new fields.

4. There needs to be an increase in the coordination of cooperative efforts between educators and the business, industry, and labor communities.

5. There is a general need for more and better counseling and the development of effective job placement programs.

6. Although the image of vocational education is improving, this is a need to help parents, academic teachers, and administrators transcend the assumption that all students should enroll in academically oriented four-year post-secondary institutions.

7. There is a need to maximize the efficiency of the city-wide system through utilization of the resources of the private schools.

8. There is a need to address the problems of sex and race discrimination in career counseling, training, and job placement.

9. There is a need to provide vocational training to handicapped students.

The Bureau of Occupational and Adult Education identified the following problems when they compiled statistical data from forty-five large cities and compared them to state statistics (*Vocational Education in Major Cities,* 1972).

1. The enrollment in vocational education programs in twenty-four major cities fell behind the expected enrollment for the size of the population.

2. Thirty-two cities spent less of the state's total funds than their enrollment indicated they should receive.

3. Twenty-three cities had a higher percentage of disadvantaged and twelve cities had a higher percentage of handicapped than the state's total enrollment of handicapped and disadvantaged. The level of funding generally lagged behind the level of enrollment for the disadvantaged and handicapped.

Vocational Education Needs. The Center for Vocational Education, as a national research and development center for vocational education, used expert opinion and consultation to identify programmatic priorities in areas of perceived need for vocational education. The *CVE Program Priorities* (1970 revised 1976) describes research and development needs across all of vocational education, but also provides information which is pertinent to large cities. The CVE program priorities focus on concerns such as the relevance of vocational curriculum; personnel development opportunities; vocational programs for occupationally disadvantaged persons; vocational guidance; the diffusion of new ideas in vocational education and leadership and management.

The Center for Vocational Education (CVE) has recently conducted a *National Survey of Vocational Education Needs* (Morrison et al., 1976). The CVE needs study focused on the research and development needs for all vocational education, including the urban dimension. Many of the need statements used in the CVE study are highly similar to the need statements used on the Large City instruments. The similarity of the data will facilitate comparisons between national needs and large city needs.

Other key studies in vocational education which were reviewed for their implications for large city vocational education programs included: (1) a study of the role of secondary schools in preparing youth for employment (Kaufman, 1967); (2) a study of the information needs of local administrators of vocational education (McKracken & Gillespie, 1973); (3) a report on the status of vocational education prepared for the National Advisory Council of Vocational Education (Lee, 1974); (4) the report from Project Baseline (Ellis, 1975); (5) a study of the contributions of vocational education to the achievements of young men (Grasso, 1975); and (6) an assessment by the Committee on Vocational Education Research and Development (Evans (chairman), 1976).

Urban Education Needs. Literature from urban education gives insight into needs resulting from the urban context in which large city vocational education programs operate. In its final report, the Task Force on Urban Education identified many problems common to urban education (Riles, 1970). The financial crisis of urban schools was viewed as the number one problem. The report documented several factors from which urban financial problems stem, such as:

1. financial deterioration due to population migration and loss of business and industry;

2. higher cost of urban education because of higher service costs in cities and more costly special educational needs of the high proportion of poor, blacks, handicapped, and immigrant students in cities;

3. inequitable state aid formulas which do not offset the disparities between central city, suburban, and rural educational costs and spending

4. dwindling public confidence in education which is accelerated by disruptive activities, such as busing, teacher strikes, and school violence;

5. minimal effectiveness of federal aid to urban areas due to low levels of aid, uncertainty about levels and availability of funds, inequitable distribution of funds, cumbersome administrative procedures, and lack of national resource allocation priorities based on needs.

The Task Force on Urban Education also investigated other general problems within the urban education system. Some of the more critical problems expressed in the report were:

1. shortages of textbooks and supplies;

2. overcrowded facilities;

3. outdated, poorly maintained facilities;

4. teacher shortages in some important content areas (e.g., industrial arts, special education, mathematics);

5. large class sizes;

6. lack of fully accredited teachers;

7. teachers who are unsuccessful in relating to and inspiring their students to learn;

8. teacher dropout;

9. low student competence in basic academic skills;

10. high student dropout rates;

11. student hostility toward the educational system which is expressed through vandalism, violence, and absenteeism;

12. teachers who are personally and economically dissatisfied with their jobs.

In a review and synthesis of many urban education studies and papers, Hummel and Nagle (1973) expanded the list of critical urban education problems to include:

1. student use of narcotics;

2. lack of relevance of the school curriculum to the lives of urban youth;

3. lack of employment opportunities for inner-city graduates;

4. the enormous size of urban school systems which intensifies depersonalization and bureaucracy;

5. racial and socioeconomic segregation.

## Synthesis of the Needs

The process of synthesizing the information gathered from personal interviews, mail surveys, and the literature review into an organized set of concise need statements was a complex task. A wealth of important information about needs in vocational education had been compiled. During the synthesis of the needs, the results from each method were organized and analyzed separately. The results from all three sources then were compared and synthesized into a composite list of need statements.

The process of synthesizing the needs included several steps accomplished in sequence. First, goal and problem statements were reviewed and critiqued by fifty-two vocational and general educators. The statements were reviewed by twelve graduate students in a university seminar on needs assessment; by ten vocational directors at a planning conference for a seminar for large city directors of vocational education; and by twenty-five research specialists and five graduate research associates at The Center for Vocational Education.

The statements in each category were reviewed approximately five times against the following seven criteria:

1. Important for large city vocational programs
2. Not-repetitive
3. Clear
4. Accurate
5. Simple and efficiently worded
6. Appropriately classified
7. Practical

Reviewers were asked to edit the statements to make them more readable and accurate, and to add important statements which they felt had not been included. They also were asked to make additional comments and criticisms concerning the statements as a whole. The recommendations from the critiques reduced the number of the statements considerably. Many statements within and across categories were combined, statements which communicated poorly were either rewritten or deleted, and less important statements were deleted.

After the number of statements was significantly reduced, related statements were clustered together. Since the statements ranged from very general to very detailed and specific, the more specific statements were organized under the more general statements to provide an overall conceptual organization. Finally, statements were edited and rewritten so that all the general statements and all the specific statements were expressed in a similar manner.

## Rating the Priority of the Needs

A packet of five instruments was developed for rating the priority of the needs. The instruments contained the statements which had emerged from the synthesis process. The statements were organized into one Major Goals instrument containing thirty general goal statements and four Specific Need instruments containing 260 specific need statements related to each of the major goals.

The heads of vocational education in large cities completed the Major Goals form. Respondents were asked to read through all the goals and then rate the relative priority of each goal as: (1) Lower priority, (2) Medium priority, or (3) Higher priority. Respondents were asked to consider three indicators of priority when rating goals: (1) the intensity or severity of the underlying problem, (2) the urgency of the situation, and (3) the potential impact of meeting the goal on the quality of vocational education.

The four Specific Need instruments contained from forty-two to eighty-four detailed statements of need in four areas: (1) Curriculum and Instruction, (2) Administration, (3) Personnel, and (4) Guidance and Counseling. The specific need statements on each instrument were clustered under headings that directly corresponded to the thirty statements on the Major Goals instrument. The vocational education directors in large cities were asked to distribute the four instruments to the members of their staff who they felt were most qualified to respond to each area. Among those who responded were: curriculum coordinators, directors of guidance services, assistant directors, administrative assistants, coordinators of career education, school principals and directors, directors of vocational schools, educational consultants, district supervisors, personnel administrators, assistant superintendents, vocational directors, coordinators of staff development, school-industry coordinators, selected teachers, and selected counselors.

Respondents were asked to first quickly read through all the statements, then to examine each statement individually, and rate its degree of need for their school district from (1) Lower to (5) Higher.

| Lower Need | | Medium Need | | Higher Need |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

When rating the degree of need, respondents were asked to consider both the amount of difference between "what is" and "what ought to be" and the importance of reducing that difference for their school district. Respondents were asked to give higher ratings to the areas which were in greatest need of development, improvement, or expansion.

Questionnaires were returned from 112 of the 160 cities surveyed (70 percent). Due to some late returns, only 106 questionnaires were used in the data analysis. A complete response to the five-part survey was received from all cities that responded.

## Validity and Reliability of the Instruments

### Validity

The content validity of the instruments is defined as the relevance of the survey items to the actual needs and conditions in large city vocational education programs. Content validity was enhanced through an iterative item generation and review process that involved multiple sources of information. For example, information about needs was sought from a variety of individuals representing vocational education, general education, and the manpower community. Additionally, information was sought in different ways including a mail survey, personal interviews, and literature review. A total of sixty-four reviewers examined the items at different stages in the instrument development process to check the relevance and comprehensiveness of the need statements. Approximately 75 percent of the reviewers had content expertise in vocational education, while the other 25 percent had expertise in either survey research or needs assessment methodology.

## Reliability

The reliability of the instruments is defined as their stability and precision. Using the TESCAN computer program (Wherry, 1975), a reliability coefficient was calculated. The overall reliability for the entire set of the four Specific Need instruments, using the Kuder-Richardson test for reliability, was 0.939. The reliability of the instruments appears to be very high. A reliability check also was built into the instruments by including the same item in more than one of the instruments. The item was rated very similarly in both instruments with mean ratings of 3.86 and 3.78.

## Data Analysis

The items on the Major Goals and Specific Needs instruments were analyzed separately. The same analysis procedures were used on both sets of data. First, frequencies and percentages were computed for each item. Second, standard statistics including means, variances, and standard deviations were calculated for each item. Third, the means were placed in rank order from highest to lowest in magnitude. Major Goals were ranked from 1 to 30 and Specific Needs were ranked from 1 to 260 where 1 was the highest rank. Ties were assigned average ranks.

SOUPAC Frequency, Standard Statistics, and Rank Order canned statistical programs were used to analyze the raw data. These analyses provided summary information concerning what all large cities perceive to be their needs.

Additional analyses were run to determine if the needs of large cities differed by their size, geographic location, and percent of minority population. Census data from the 1973 population estimates of the U.S. Census Bureau were used to classify cities according to these three variables. All cities with more than 100,000 inhabitants were classified by size into three categories:

1. Large (more than 500,000 inhabitants)
2. Medium (200,000 to 500,000 inhabitants)
3. Small (less than 200,000 inhabitants)

Cities were classified by their geographic locations using the four census divisions illustrated in Figure 1 into:

1. Northeast
2. North Central
3. South
4. West

Cities were classified by their percentage of minority populations into three categories:

1. High (over 30 percent)
2. Medium (15-30 percent)
3. Low (under 15 percent)

FIGURE 1

CLASSIFICATION OF STATES INTO FOUR GEOGRAPHIC REGIONS

Spearman's Rank Order Correlation method was used to determine the extent of relationship among the vocational education priorities in cities of different size, geographic location, and minority level. The ranks given to the major goals in small cities, medium cities, and large cities were compared to determine the extent of correlation among the rankings. Large differences among the ranks were examined visually and described. This same process was repeated for comparing the priorities among cities in different geographic locations and in cities with different concentrations of minority residents. Friedmans' Rank Sum Statistic was also calculated to determine if the intensity of need significantly differed by size, location, or minority concentration.

## III. NATIONAL PRIORITIES

The results of the study provide two levels of information for a national urban vocational education data base: (1) general information about the major goal priorities, and (2) detailed information about the specific need priorities. The subsequent chapter on "Unique Priorities" provides information about the needs experienced in different types of large cities.

### Major Goal Priorities

Thirty major goals were placed in rank order from highest to lowest priority based on their average rating by large city directors of vocational education. The ten highest ranked goals are listed in descending order of priority in Table 2. The ten goals in the medium priority range are listed in descending order of priority in Table 3. The ten goals in the lower priority range are listed in descending order of priority in Table 4.

Vocational directors rating thirty goals as higher, medium, or lower priorities both confirm and negate some commonly held preconceptions about vocational education in large cities. Although cities are typically thought of as having old, inadequate facilities and out-of-date equipment, the need for expanded and rennovated facilities was a lower priority. The need for more up-to-date equipment was more highly rated than facilities; but is still not one of the top priorities for cities. The need for a sufficient level of supplies also was viewed as a medium priority.

Inner-city schools are often thought of as attracting more "lower quality" personnel and having insufficient quantity of personnel to adequately serve all the students enrolled. Yet the need for a greater quantity and more capable personnel was rated as one of the lower priorities. Personnel related activities, such as improved preservice preparation, more defined leadership development activities, more in-service personnel development, and increased involvement of teachers in areas other than teaching were all rated fairly low in terms of their relative priority to the other thirty goals.

The social dimension is another area in which cities are typically thought of as having more intense problems. Yet the goal related to coping with social problems, delinquency, and disruptive activities was ranked very low in terms of its relative priority. Improving services to persons with special needs was a medium priority, and developing procedures to insure equal educational opportunities was a lower priority.

Since most cities have a greater variety of industries and businesses in operation, the placement of students in cooperative-work-experience programs is usually viewed as being less difficult in cities. However, expanding work experience opportunities for students is perceived as one of the higher priority needs by vocational directors.

The popular media as well as more scholarly avenues report that many cities are moving toward a financial crisis. Urban schools are viewed as riding on the crest of the crisis since they are supported

Table 2

**Higher Priority Goals for Vocational Education in Large Cities as Perceived by City Directors**

| Rank* | Goal | Mean** |
|---|---|---|
| 1 | Funding Base. Provide a more adequate and equitable funding base for large city vocational education programs from state, local, and federal sources. | 2.70 |
| 2 | Vocational Guidance. Provide comprehensive guidance and counseling services so vocational students can better select careers and educational programs suited to their interests and abilities. | 2.69 |
| 3 | Relevance of Vocational Content. Insure the relevance of vocational curricula to current job practices and opportunities through effective means for identifying, selecting, and updating content. | 2.61 |
| 4 | Basic Academic Instruction. Provide opportunities for all vocational students to acquire the reading, communication, and math skills required for coursework and jobs. | 2.58 |
| 5 | Job Placement. Coordinate and expand efforts at all levels (teacher, school, district, state, federal) to place vocational students in occupations related to their education. | 2.57 |
| 6 | Community Relations and Support. Better communicate the content and benefits of vocational education to parents, students, employers, and all general educators. | 2.50 |
| 7 | Work Experience. Expand opportunities for students to explore and practice job skills in community and school settings. | 2.44 |
| 8 | Curriculum Development. Upgrade and improve vocational curricula and the curriculum materials used by students and educators. | 2.40 |
| 9 | Accessible Guidance Services. Make guidance, counseling, and placement services more accessible to all vocational students. | 2.39 |
| 10 | Coordination with the Manpower Community. Pursue better coordination with business, industry, labor, and other key segments of the manpower community. | 2.34 |

*1 is the highest rank.

**3.0 is the highest and 1.0 is the lowest possible mean score.

**Table 3**

**Medium Priority Goals for Vocational Education in Large Cities as Perceived by City Directors**

| Rank | Goal | Mean |
|---|---|---|
| 11 | Up-to-Date Equipment. Improve the planning and financing of equipment for vocational instruction so up-to-date equipment can be maintained. | 2.27 |
| 12 | Transition from School to Work. Develop pre-employment job readiness programs and post-employment follow-through activities for assisting students in their transitions from school to work. | 2.26 |
| 13.5 | Serving Persons with Special Needs. Improve ability of vocational education to serve persons with special needs (i.e., physical or mental handicaps, limited English speaking ability, inmates in correctional settings, migrants, etc.) | 2.24 |
| 13.5 | Follow-up. Improve and expand follow-up studies of former students and their employers. | 2.24 |
| 15 | Curriculum Innovation. Improve and expand the development, diffusion, and maintenance of new ideas in vocational education. | 2.23 |
| 16.5 | Local Management. Provide tools and techniques for improving local planning, management, and evaluation of vocational education programs. | 2.22 |
| 16.5 | Expendable Supplies. Provide a sufficient level of supplies for operating all vocational programs. | 2.22 |
| 18 | Personnel Development. Improve opportunities for practicing vocational education personnel to maintain and expand their competencies. | 2.19 |
| 19 | Reducing Dropout, Absenteeism, and Tardiness. Develop services and procedures to reduce student dropout rates, absenteeism, and tardiness. | 2.18 |
| 20 | Flexible, Varied Vocational Programming. Increase the flexibility of vocational instruction to meet the pressure for more enrollment and to serve the variety of individuals in urban settings. | 2.17 |

**Table 4**

**Lower Priority Goals for Vocational Education in Large Cities as Perceived by City Directors**

| Rank | Goal | Mean |
|---|---|---|
| 21 | Adult Vocational Education. Expand adult vocational education programs to more adequately serve the training needs of adults who are unemployed or underemployed. | 2.10 |
| 22 | Facilities and Instructional Space. Expand and rennovate the facilities and space available for vocational education. | 2.06 |
| 23 | Preservice Preparation. Improve the preservice preparation of vocational education personnel to meet present and emerging competency needs. | 2.03 |
| 24 | Teacher Involvement in Supplementary Activities. Increase the participation of vocational teachers in supplementary activities, such as curriculum development, professional development, community relations, and job placement. | 2.02 |
| 25 | Leadership Development. Define leadership roles and design and implement leadership preparation programs for vocational administrators and supervisors. | 1.97 |
| 26 | Equal Educational Opportunities. Develop standards and procedures for enrolling students in appropriate vocational programs on an equal opportunity basis. | 1.92 |
| 27 | Quantity, Quality, and Diversity of Personnel. Provide a greater quantity of, more capable, and a wider variety of specialized personnel for vocational programs. | 1.86 |
| 28 | Cooperation Among the Levels of Vocational Education. Increase cooperation among the various levels and departments in vocational education. | 1.85 |
| 29 | Coping with Social Problems. Develop mechanisms for coping with delinquency, social problems, and disruptive activities which affect urban schools. | 1.73 |
| 30 | Post-Secondary Vocational Education. Assist the orderly development of post-secondary vocational education programs, methods, and materials. | 1.62 |

primarily through local taxes and bonds. The results of the study firmly support this pre-conceived need. The number one priority of city directors is to provide a more adequate and equitable funding base for large city vocational programs.

The need for more comprehensive and more accessible vocational guidance and job placement services are viewed as very high priorities for cities. Of the highest ten priorities, 40 percent relate to guidance and placement. High priority needs span the areas of: vocational guidance, job placement, work experience, and accessible guidance services.

There is a high need to improve community relations and support with parents, students, employers, and general educators and to improve coordination with the manpower community.

In the area of curriculum, a very high need exists for developing techniques to insure the relevance of vocational content. A high need for basic academic instruction is also evident. There is also a high need to upgrade and improve vocational curriculum and curriculum materials.

Education for adults is perceived as a lower goal area by vocational directors. Programs for unemployed and underemployed adults and other post-secondary programs are viewed as lower priorities than secondary and pre-vocational programs.

## Specific Need Priorities

The 260 specific needs were placed in rank order from highest to lowest need. The highest ranked fifty specific needs for vocational programs in large cities as perceived by central office staff are listed in descending order of priority in Tables 5 through 9.

Many of the needs ranking in the top fifty are related to the six highest priority major goal areas for urban vocational education: funding base, vocational guidance, relevance of vocational content, basic academic instruction, student job placement, and community relations and support.

Specific needs related to the number one priority goal, providing a more adequate and equitable funding base for vocational education programs in major urban areas, are listed in order of priority below:

- Developing firm commitments concerning the amount of and timelines for vocational funding to local districts,
- Providing district forward funding based on long-range plans,
- Providing direct funding to large urban areas,
- Providing general purpose as well as categorized funding to districts,
- Improving the resource allocation formulas used to fund urban and rural areas,
- Developing alternative funding bases at the local level.

Table 5

**Highest Ranked Ten Specific Needs for Vocational Education in Large Cities as Perceived by District Level Vocational Education Personnel**

| Rank* | Need | Mean** |
|---|---|---|
| 1 | Firm commitments concerning amounts of and timelines for vocational funding so local districts may plan and initiate programs on schedule. | 4.38 |
| 2 | District forward funding based on long-range plans to permit continuity of program planning and services. | 4.03 |
| 3.5 | Parental awareness of the goals and opportunities available in secondary and post-secondary vocational programs as compared to college. | 4.00 |
| 3.5 | Counseling prior to enrollment to assist students in clarifying their purpose for enrolling in vocational education and selecting the right program. | 4.00 |
| 5.5 | Effective preservice counselor education programs for preparing counselors in vocational guidance. | 3.99 |
| 5.5 | Allocation of counselors' time so that an adequate percentage is spent in face-to-face counseling with vocational students. | 3.99 |
| 7 | Coordination between vocational and academic curricula so that academic courses emphasize vocational applications and academic skills are improved within vocational courses. | 3.96 |
| 8 | Ways to reduce student absenteeism and tardiness. | 3.95 |
| 9.5 | Awareness by federal and state vocational education leaders of the critical large city vocational education issues. | 3.91 |
| 9.5 | Counseling for students with negative attitudes toward work, the educational system, themselves and/or others. | 3.91 |

*1 is the highest rank.

**5.0 is the highest and 1.0 is the lowest possible mean score.

Table 6

**Medium High Needs for Vocational Education in Large Cities as Perceived by District Level Personnel**

| Rank | Need | Mean |
|---|---|---|
| 11.5 | Providing some systematic counseling to all students, not just when they are in trouble. | 3.88 |
| 11.5 | Training vocational teachers and counselors in new and innovative approaches to vocational education. | 3.88 |
| 13.5 | Opportunities for students to develop positive work habits and attitudes (e.g., dependability, ability to follow through, efficient use of time, pride of craftsmanship, willingness to learn). | 3.86 |
| 13.5 | Systematic initiation of new vocational programs in emerging occupations and fields with expanding employment opportunities. | 3.86 |
| 15 | Well-rounded and valid testing program including interest and aptitude tests for assisting all vocational students, ninth grade through adult, in selecting a vocation. | 3.85 |
| 16 | Development and use of competency or performance based instruction. | 3.84 |
| 17 | Standards, procedures, and funds for replacing obsolete equipment. | 3.81 |
| 18 | Involvement of teachers in in-service education and industry-based exploratory and on-the-job experiences. | 3.80 |
| 19 | Direct federal funding to major urban areas without their elimination from state funding. | 3.79 |
| 20.5 | Procedures for incorporating demonstrated innovations into the operating school district when outside funds are no longer available. | 3.77 |

Table 7

**Medium Needs for Vocational Education in Large Cities as Perceived by District Level Personnel**

| Rank | Need | Mean |
|---|---|---|
| 20.5 | Business and industry's use of vocational education programs as a source of employees. | 3.77 |
| 22.5 | Rapport and cooperation between academic and vocational teachers. | 3.76 |
| 22.5 | Up-to-date, supportive public image of vocational education. | 3.76 |
| 24 | Communication with middle and high school students through various avenues to convey the career opportunities in secondary and post-secondary vocational education programs. | 3.74 |
| 25.5 | General purpose funds, as well as categorized funding so some district priorities can be addressed. | 3.72 |
| 25.5 | Middle school and high school counselors knowledge about available secondary and post-secondary vocational programs. | 3.72 |
| 27.5 | Resource allocation formulas which allow for differences in the cost of delivering vocational education in urban and rural areas. | 3.70 |
| 27.5 | Community general awareness of the vocational program offerings available. | 3.70 |
| 29 | Developing the special awareness, instructional skills, and service skills required to serve the handicapped, minorities, and other groups with special needs. | 3.68 |
| 31.5 | Development of alternative bases for obtaining funds at the local level. | 3.64 |

Table 8

**Medium Low Needs for Vocational Education in Large Cities as Perceived by District Level Personnel**

| Rank | Need | Mean |
|---|---|---|
| 31.5 | Opportunities for students to develop problem-solving skills for coping with work entry and job adjustment problems. | 3.64 |
| 31.5 | Collection of information from present employers of vocational graduates concerning graduates on-the-job performance. | 3.64 |
| 31.5 | Up-to-date and valid information about the job competencies needed in various occupational areas. | 3.64 |
| 34 | Vocational education curricula and instructional materials for use in open entry open exit situations. | 3.63 |
| 36 | Pre-vocational orientation and exploratory programs for middle school students to introduce them to several career clusters. | 3.62 |
| 36 | Pre-employment job readiness programs to help students learn job seeking skills, such as job hunting, job interviews, completing job applications, etc. | 3.62 |
| 36 | Communication with all general educators (principals, assistant principals, supervisors, department chairpersons, teachers, counselors, and other staff) concerning the goals and content of vocational education. | 3.62 |
| 39.5 | Availability of vocational education centers and tactics for for attracting students to them. | 3.61 |
| 39.5 | Clear-cut delivery system for supplying career information and skills to vocational students. | 3.61 |
| 39.5 | Methods for diagnosing the basic academic competencies of students so that appropriate remedial activities can be prescribed. | 3.61 |

Table 9

**Lower Needs for Vocational Education in Large Cities as Perceived by District Level Personnel**

| Rank | Need | Mean |
|---|---|---|
| 39.5 | Opportunities for vocational leaders to improve skills in areas, such as long-range planning, needs assessment, program evaluation, management techniques, and information systems. | 3.61 |
| 42 | Systematic procedures for using the information collected through follow-up studies to improve the educational process. | 3.59 |
| 43.5 | Vocational education programs for early school leavers and unemployed youth. | 3.57 |
| 43.5 | Personnel development in maintaining current career and vocational information in areas, such as job requirements, working conditions, and employment opportunities for various occupational areas. | 3.57 |
| 46 | Frequent and consistent communication with employers to provide information on the programs offered, services provided, and employees available through vocational education programs. | 3.56 |
| 46 | Remedial basic skill programs for students with weak academic skills. | 3.56 |
| 46 | Infusion of career education concepts into all vocational instruction. | 3.56 |
| 48.5 | Appropriate student-counselor ratio at the pre-vocational, secondary, and continuing education levels. | 3.55 |
| 48.5 | Curriculum materials in math and English geared to vocations. | 3.55 |
| 50 | Assisting vocational teachers to instruct the academically deficient students in their vocational classes. | 3.52 |

Specific needs related to the second priority major goal, providing vocational guidance so students can select careers suited to their interests and abilities, include in order of priority:

- Counseling prior to enrollment to help students clarify their goals and select the right vocational program,
- Improving preservice training for vocational counselors,
- Allocating more of counselors time for face-to-face counseling with vocational students,
- Developing ways to reduce absenteeism and tardiness,
- Counseling students with negative attitudes toward school,
- Providing some systemic counseling to all students, not just when they are in trouble,
- Providing opportunities for students to develop positive work habits and attitudes,
- Developing well rounded interest and aptitude testing programs for all vocational students, ninth grade through adult.

For the third priority major goal, insuring the relevance of vocational content to current job opportunities and practices, specific needs in priority order include:

- Initiating new vocational programs in emerging occupations and fields with expanding employment opportunities,
- Developing competency based instruction,
- Collecting information from employers concerning graduates on-the-job performance,
- Assisting vocational personnel to maintain up-to-date information in their occupational area,
- Developing ways to use the information collected through follow-up studies to improve the educational process,
- Assisting vocational personnel to maintain current information on employment opportunities, job requirements, and working conditions in their occupational area.

For the fourth priority major goal, improving basic academic instruction in reading, communication, and math, specific needs in priority order include:

- Increasing the coordination between academic and vocational curricula,
- Increasing the rapport between vocational and academic teachers,
- Improving methods for diagnosing students' remedial basic academic needs,
- Improving remedial academic programs,

- Developing curriculum materials in math and English geared to vocations,
- Assisting vocational teachers to instruct academically deficient students.

For the fifth priority major goal, coordinating and expanding job placement efforts, specific needs in priority order include:

- Increasing business and industry's use of vocational education programs as a source of employees,
- Training students to cope with work entry and job adjustment problems,
- Training students in job seeking skills,
- Providing vocational programs for early school leavers and unemployed youth.

For the sixth priority major goal, improving community relations and support so parents, students, employers, and general educators will better understand the content and benefits of vocational education, specific needs in priority order include:

- Increasing parental awareness of vocational education opportunities as compared to college,
- Increasing federal and state awareness of large city vocational education problems,
- Developing an up-to-date, supportive image for vocational education,
- Communicating with middle and high school students about vocational education opportunities,
- Communicating with the general public about vocational education,
- Communicating with general educators about vocational education,
- Communicating with employers about vocational education programs, students, and services.

## Relationship Between the Major Goal and Specific Need Priorities

Comparisons were made between the rankings of the thirty major goals and the rankings of the specific needs classified under these goals. The extent of agreement between the average rankings of each major goal and the median ranking of each related cluster of specific needs was measured, using Spearman's Rank Difference Correlation method. (Median rankings were used for the specific needs to minimize the effects of extreme scores.) The ranks and differences between the ranks for major goals and specific needs are displayed in Table 10. The overall amount of correlation between the major goal rankings and the specific needs rankings is .61.

## Table 10

### Comparison of the Rankings* of Thirty Major Goals and Thirty Specific Need Clusters

| | Goal Area | Major Goal Ranks | Specific Need Median Ranks | Amount of Difference |
|---|---|---|---|---|
| 1. | Basic Academic Instruction | 4 | 4 | 0 |
| 2. | Relevance of Vocational Content | 3 | 12 | 9 |
| 3. | Work Experience | 7 | 17 | 10 |
| 4. | Curriculum Development | 8 | 21 | 14 |
| 5. | Serving Persons with Special Needs | 13 | 28.5 | 14.5 |
| 6. | Flexible, Varied Vocational Programming | 20 | 16 | 4 |
| 7. | Adult Vocational Education | 21 | 28.5 | 7.5 |
| 8. | Post-Secondary Vocational Education | 30 | 30 | 0 |
| 9. | Curriculum Innovation | 15 | 6 | 9 |
| 10. | Funding Base | 1 | 1 | 0 |
| 11. | Local Management | 16.5 | 18 | 1.5 |
| 12. | Community Relations and Support | 6 | 2 | 4 |
| 13. | Coordination with the Manpower Community | 10 | 10 | 0 |
| 14. | Cooperation Among the Levels of Vocational Education | 28 | 22 | 6 |
| 15. | Up-to-Date Equipment | 11 | 20 | 9 |
| 16. | Facilities and Instructional Space | 22 | 23.5 | 1.5 |
| 17. | Expendable Supplies | 16.5 | 27 | 10.5 |
| 18. | Personnel Development | 18 | 11 | 7 |
| 19. | Leadership Development | 25 | 9 | 6 |
| 20. | Teacher Involvement in Supplementary Activities | 24 | 23.5 | 0.5 |
| 21. | Quantity, Quality, and Diversity of Personnel | 27 | 25 | 2 |
| 22. | Preservice Preparation | 23 | 8 | 15 |
| 23. | Equal Educational Opportunities | 26 | 26 | 0 |
| 24. | Vocational Guidance | 2 | 3 | 1 |
| 25. | Reducing Dropout, Absenteeism, and Tardiness | 19 | 13 | 6 |
| 26. | Coping with Social Problems | 29 | 19 | 10 |
| 27. | Accessible Guidance Services | 9 | 14 | 5 |
| 28. | Transition from School to Work | 12 | 5 | 7 |
| 29. | Job Placement | 5 | 15 | 10 |
| 30. | Follow-up | 14 | 7 | 7 |

*1 = Highest Rank

The positive relationship indicates that:

1. the major goals are generally meaningful summaries for the specific needs;

2. the specific needs are generally accurate elaborations of major goal concepts; and

3. there are not significant differences between the rating patterns of the groups who completed the Major Goals and Specific Needs instruments.

An examination of Table 10 reveals fairly close agreement (less than five points difference) between goal and need rankings in twelve goal areas. The closer agreements tend to occur among the higheset and lowest ranked goal areas. For example, there is close agreement between five of the top ten goal areas: Basic Academic Instruction, Funding Base, Community Relations and Support, Coordination with the Manpower Community, and Vocational Guidance. At the other end of the continuum, there is also close agreement between five of the ten lowest priority goal areas: Post-Secondary Vocational Education, Facilities and Instructional Space, Teacher Involvement in Supplementary Activities, Quality of Personnel, and Equal Educational Opportunities. There is also close agreement on the priority of Flexible Vocational Programming and Local Management, both in the medium priority range.

There are interesting and fairly large differences between the major goal and specific need priorities for: Preservice Preparation, Serving Persons with Special Needs, Curriculum Development, Expendable Supplies, Coping with Social Problems, and Work Experience.

## Some Conclusions about the National Priorities in Large Cities

The following conclusions are based upon a study of the results of the study. The conclusions are listed in descending order of importance as perceived by the local directors of vocational education:

1. The highest ranked national major goal area and 12 percent of the top fifty specific needs concern the funding base for vocational education programs in major urban areas.

2. Sixty percent of the highest priority major goals relate to improving the linkages between vocational programs and the world of work.

3. Of the fifty top ranked specific needs for the nation, the greatest proportions are in the major goal areas of vocational guidance and community relations.

4. Major goals related to the ongoing support and maintenance of vocational programs tend to be ranked as lower or medium national priorities.

5. In general, large city directors of vocational education and members of their staffs across the nation rate both the major goals and specific needs in the areas of post-secondary vocational education and adult vocational education as lower priorities.

6. In general, large city directors of vocational education and members of their staffs across the nation perceive serving persons with special needs and equal educational opportunities to be lower priorities.

## IV. UNIQUE PRIORITIES

Using census data, the major goal priorities were compared by city size, geographic location, and minority level to determine if different types of large cities have unique needs. Friedman's Rank Sum statistic was calculated to determine if there were significant differences in the intensity of need experienced in different types of large cities. The ranks of the goals also were compared using Spearman's Rank Order Correlation method to examine the amount of agreement among the priorities in various types of cities and to describe key differences.

### Priorities by City Size

Of the 106 cities included in the data analysis, twenty-one or 19.8 percent had more than 500,000 inhabitants and were classified as large. Twenty-five cities or 23.6 percent had between 200,000 and 500,000 inhabitants and were classified as medium. Sixty cities or 56.6 percent had less than 200,000 inhabitants and were classified as small.

To determine if the goals tended to be rated higher in some size cities than others, the mean ratings of the major goals of cities at these three levels of size were calculated and compared. No significant differences in the intensity of need by size were found. However, the level of need is slightly higher in both medium and large than in small urban areas. There is little difference between the felt intensity of need in large and medium size urban areas. The way needs were ranked for each level of size also were compared and are listed in Table 11.

Although there are moderately strong correlations among cities' priorities by all levels of size, the results show the least agreement between the priorities of medium and large cities (correlation = .72). There is fairly high agreement between the priorities of both small and medium cities (correlation = .81) and small and large cities (correlation = .84).

When the rank order of the needs in cities of different size were examined visually, several interesting trends became evident. The highest and lowest priorities were very similar across all sizes of cities. Differences appeared more among the medium priorities. Important differences in the ranks are presented in descending order of magnitude below:

| | | Amount of Greatest Difference* |
|---|---|---|
| 1. | Medium and small cities express a much stronger need for Up-to-Date Equipment than large cities. | 17 |

*Amount of difference between the highest and lowest ranks for each goal area.

## Table 11

### Ranks[1] of Major Goals in Cities of Different Size

| | Goal Area | Size | | |
|---|---|---|---|---|
| | | Small* | Medium** | Large*** |
| 1. | Basic Academic Instruction | 5.5 | 4.0 | 2.0 |
| 2. | Relevance of Vocational Content | 3.0 | 5.0 | 3.5 |
| 3. | Work Experience | 5.5 | 14.0 | 9.5 |
| 4. | Curriculum Development | 8.0 | 7.0 | 17.5 |
| 5. | Serving Persons with Special Needs | 18.0 | 9.0 | 12.5 |
| 6. | Flexible, Varied Vocational Programming | 19.5 | 10.5 | 22.5 |
| 7. | Adult Vocational Education | 21.0 | 16.0 | 25.0 |
| 8. | Post-Secondary Vocational Education | 30.0 | 28.0 | 23.0 |
| 9. | Curriculum Innovation | 16.0 | 19.5 | 8.0 |
| 10. | Funding Base | 2.0 | 1.0 | 1.0 |
| 11. | Local Management | 13.0 | 18.0 | 19.5 |
| 12. | Community Relations and Support | 7.0 | 8.0 | 5.0 |
| 13. | Coordination with the Manpower Community | 11.0 | 12.5 | 9.5 |
| 14. | Cooperation Among the Levels of Vocational Education | 27.0 | 26.5 | 28.0 |
| 15. | Up-to-Date Equipment | 12.0 | 24.0 | 7.0 |
| 16. | Facilities and Instructional Space | 24.5 | 21.5 | 11.0 |
| 17. | Expendable Supplies | 19.5 | 12.5 | 12.5 |
| 18. | Personnel Development | 14.0 | 16.0 | 22.5 |
| 19. | Leadership Development | 22.0 | 26.5 | 26.0 |
| 20. | Teacher Involvement in Supplementary Activities | 23.0 | 21.5 | 22.5 |
| 21. | Quantity, Quality, and Diversity of Personnel | 28.0 | 24.0 | 28.0 |
| 22. | Preservice Preparation | 24.5 | 16.0 | 19.5 |
| 23. | Equal Educational Opportunities | 26.0 | 29.0 | 22.5 |
| 24. | Vocational Guidance | 1.0 | 2.0 | 3.5 |
| 25. | Reducing Dropout, Absenteeism, and Tardiness | 15.0 | 24.0 | 15.0 |
| 26. | Coping with Social Problems | 29.0 | 30.0 | 30.0 |
| 27. | Accessible Guidance Services | 9.0 | 6.0 | 15.0 |
| 28. | Transition from School to Work | 10.0 | 19.5 | 17.5 |
| 29. | Job Placement | 4.0 | 3.0 | 6.0 |
| 30. | Follow-up | 17.0 | 10.5 | 15.0 |

[1]Rank 1 is highest.

*Less than 200,000 inhabitants. **Between 200,000 and 500,000 inhabitants. ***More than 500,000 inhabitants.

| | | |
|---|---|---|
| 2. | Medium size cities express a more urgent need for expanding and renovating Facilities and Instructional Space than either large or small cities. | 15.5 |
| 3. | Large cities experience a greater need for Flexible Varied Vocational Programming than either small or medium size cities. | 12 |
| 4. | Medium size cities express a greater need for Curriculum Innovation than large cities. | 11.5 |
| 5. | Large cities perceive greater needs than small cities in Serving Persons with Special Needs. | 9 |
| 6. | Large cities perceive lesser need in Reducing Dropout, Absenteeism, and Tardiness than medium and small cities. | 9 |
| 7. | Small cities perceive a greater need to improve Local Management of vocational education than either medium or large cities. | 8.5 |
| 8. | Small and medium cities perceive greater needs in the area of Work Experience than large cities. | 8 |
| 9. | Large cities express greater needs in the area of Basic Academic Instruction than small cities. | 4 |

## Priorities by Geographic Location

Cities were classified into four geographic locations using census regions. Eighteen cities or 17 percent were in the Northeast; thirty-four cities or 32 percent were located in the North Central portion of the United States; thirty-five cities or 33 percent were in the South; and nineteen cities or 18 percent were in the West.

The mean ratings of the major goals of cities in these four geographic locations were compared to determine if the intensity of need was related to geographic location. The results provide strong evidence that there are differences in the perceived intensity of need among cities in different geographic locations. The differences by geographic location are greater than the differences by size. When geographic areas were compared to determine where the greatest differences existed, significant differences were found in the intensity of need between: cities in the Northeast and the South, cities in Northeast and North Central United States, and cities in the South and West. There is little difference between the intensity of need in the Northeast and West, and between North Central and Southern United States.

The rank order of the needs in different geographic location was compared to determine the amount of correlation (Table 12). Overall, there is less agreement among the priorities by geographic location than by size with intercorrelations ranging from .67 to .85. The priorities of cities are the most similar between North Central and Southern United States (Correlation = .85). The priorities of cities are the least similar between North Central and Western United States (correlation = .67); North Central and Northeastern United States (correlation = .73); and Northeastern and Southern United States (correlation = .73).

## Table 12

### Ranks of Major Goals in Cities in Different Geographic Locations

| | Goal Area | North-east | North Central | South | West |
|---|---|---|---|---|---|
| 1. | Basic Academic Instruction | 1.5 | 3.0 | 6.0 | 9.0 |
| 2. | Relevance of Vocational Content | 1.5 | 6.5 | 1.0 | 4.0 |
| 3. | Work Experience | 4.0 | 9.0 | 9.5 | 4.0 |
| 4. | Curriculum Development | 11.5 | 12.0 | 5.0 | 7.0 |
| 5. | Serving Persons with Special Needs | 16.5 | 20.0 | 13.5 | 11.0 |
| 6. | Flexible, Varied Vocational Programming | 21.0 | 16.0 | 15.5 | 25.0 |
| 7. | Adult Vocational Education | 13.5 | 23.5 | 20.0 | 16.0 |
| 8. | Post-Secondary Vocational Education | 16.5 | 30.0 | 30.0 | 30.0 |
| 9. | Curriculum Innovation | 16.5 | 16.0 | 11.5 | 21.5 |
| 10. | Funding Base | 6.5 | 2.0 | 2.0 | 1.0 |
| 11. | Local Management | 21.0 | 16.0 | 9.5 | 23.5 |
| 12. | Community Relations and Support | 4.0 | 6.5 | 7.5 | 7.0 |
| 13. | Coordination with the Manpower Community | 11.5 | 19.0 | 7.5 | 7.0 |
| 14. | Cooperation Among the Levels of Vocational Education | 28.0 | 28.5 | 26.5 | 26.0 |
| 15. | Up-to-Date Equipment | 6.5 | 12.0 | 19.0 | 12.5 |
| 16. | Facilities and Instructional Space | 25.5 | 25.5 | 22.5 | 10.0 |
| 17. | Expendable Supplies | 8.5 | 16.0 | 21.0 | 12.5 |
| 18. | Personnel Development | 21.0 | 16.0 | 17.5 | 16.0 |
| 19. | Leadership Development | 27.0 | 27.0 | 22.5 | 20.0 |
| 20. | Teacher Involvement in Supplementary Activities | 21.0 | 25.5 | 24.5 | 16.0 |
| 21. | Quantity, Quality, and Diversity of Personnel | 25.5 | 28.5 | 28.0 | 28.0 |
| 22. | Preservice Preparation | 16.5 | 22.0 | 26.5 | 21.5 |
| 23. | Equal Educational Opportunities | 29.0 | 21.0 | 24.5 | 27.0 |
| 24. | Vocational Guidance | 4.0 | 1.0 | 4.0 | 2.0 |
| 25. | Reducing Dropout, Absenteeism, and Tardiness | 24.0 | 8.0 | 17.5 | 23.5 |
| 26. | Coping with Social Problems | 30.0 | 23.5 | 29.0 | 29.0 |
| 27. | Accessible Guidance Services | 10.0 | 5.0 | 11.5 | 16.0 |
| 28. | Transition from School to Work | 21.0 | 10.0 | 13.5 | 16.0 |
| 29. | Job Placement | 8.5 | 4.0 | 3.0 | 4.0 |
| 30. | Follow-up | 13.5 | 12.0 | 15.5 | 19.0 |

A visual examination of the most outstanding differences among cities in different areas of the country concerning their perceived priorities was made and the greatest differences are highlighted in descending order of magnitude below.

| | | Amount of Greatest Difference |
|---|---|---|
| 1. | The need to Reduce Dropout, Absenteeism, and Tardiness is viewed as a high priority in North Central United States, a moderate priority in the South, and a low priority in the Northeast and West. | 16 |
| 2. | Expansion and rennovation of Facilities and Instructional Space is viewed as a higher priority need in the West than other locations. | 15.5 |
| 3. | The improvement of Local Management tools and techniques is perceived as a higher need in the South than other areas of the country. | 14 |
| 4. | Coping with Social Problems is experienced as a higher priority in the South and West than either the Northeast or the North Central region. | 13 |
| 5. | The need for more Up-to-Date Equipment is perceived to be higher in the Northeast than other regions of the country. | 12.5 |
| 6. | Coordination with the Manpower Community is viewed as a less critical need in North Central United States than in other areas. | 12 |
| 7. | The need for a sufficient level of Expendable Supplies is experienced as a higher need in the Northeast than other regions. | 11.5 |
| 8. | Assisting students in their Transition from School to Work is viewed as a high need in the North Central region, a moderate need in the South and West, and a low need in the Northeast. | 11 |
| 9. | The need to improve Preservice Preparation of vocational personnel is viewed higher in the Northeast than the South. | 10 |
| 10. | The improvement of Adult Vocational Education is viewed as a higher need in Northeastern than North Central United States. | 10 |
| 11. | Curriculum Innovation is viewed as a lower priority in the West than in other geographic regions. | 10 |

## Priorities by Minority Concentration

Cities were classified into three groups based on their level of minority population. Twenty cities or 19 percent had a minority population of over 30 percent and were classified as high. Forty cities or 38 percent had a minority population between 15 and 30 percent and were classified as medium. Forty-six cities or 43 percent had less than 15 percent minority level and were classified as low.

The mean ratings for the major goals by cities at these three levels of minority population were compared to determine if the intensity of perceived need was related to minority level. The analysis revealed that the differences by minority level are highly significant and greater than either the differences by size or geographic location.

The ratings of the goals for the three levels of minority population were compared to determine the most significant difference between the groups. Significant differences were found between high and low minority level cities ($p > .001$) and between high and medium minority level cities ($p > .005$). Cities with a high minority concentration (i.e., above 30 percent) have more intense needs than cities with medium and lower minority levels.

The ranks of the goals in cities with different levels of minority concentration were compared to determine the amount of correlation among the priorities of cities with different, minority concentrations. The ranks for each minority level are listed in Table 13. The results portray high intercorrelations among the priorities of cities with high, medium, and low minority levels. There is more agreement among the rank order of the need in cities when compared by minority level than by either size or geographic location.

As with the prior comparisons of the priorities of cities by size and geographic location, the highest five and lowest five priorities are similar across the three levels of minority population. Differences in the ranks emerge in the middle priority range. Some of the more interesting and larger differences are presented below in descending order of magnitude.

| | | Amount of the Greatest Difference |
|---|---|---|
| 1. | Maintaining Up-to-Date Equipment is seen as a greater need in high minority cities than either medium or low minority cities. | 11.5 |
| 2. | High minority cities express a lesser need for Coordination with the Manpower Community than low minority cities. | 10.5 |
| 3. | Reducing Dropout, Absenteeism, and Tardiness is perceived as a greater need in high minority cities than low minority cities. | 9.5 |
| 4. | High minority cities express a greater need for Flexible, Varied Vocational Programming. | 9 |
| 5. | Serving Persons with Special Needs is perceived as a higher priority in high minority cities than medium or low minority cities. | 7 |

## Table 13

### Ranks of Major Goals in Cities with Different Minority Concentration

| | Goal Area | Minority Level | | |
|---|---|---|---|---|
| | | Low* | Medium** | High*** |
| 1. | Basic Academic Instruction | 5.0 | 4.0 | 2.5 |
| 2. | Relevance of Vocational Content | 3.0 | 2.0 | 6.0 |
| 3. | Work Experience | 6.5 | 8.0 | 14.5 |
| 4. | Curriculum Development | 9.5 | 9.5 | 10.5 |
| 5. | Serving Persons with Special Needs | 12.5 | 17.5 | 10.5 |
| 6. | Flexible, Varied Vocational Programming | 18.5 | 19.5 | 10.5 |
| 7. | Adult Vocational Education | 21.5 | 22.0 | 19.0 |
| 8. | Post-Secondary Vocational Education | 30.0 | 30.0 | 29.0 |
| 9. | Curriculum Innovation | 16.5 | 11.5 | 11.5 |
| 10. | Funding Base | 1.0 | 3.0 | 1.0 |
| 11. | Local Management | 16.5 | 11.5 | 14.5 |
| 12. | Community Relations and Support | 8.0 | 5.5 | 6.0 |
| 13. | Coordination with the Manpower Community | 6.5 | 14.5 | 17.0 |
| 14. | Cooperation Among the Levels of Vocational Education | 28.5 | 25.0 | 29.0 |
| 15. | Up-to-Date Equipment | 12.5 | 17.5 | 6.0 |
| 16. | Facilities and Instructional Space | 21.5 | 23.0 | 23.5 |
| 17. | Expendable Supplies | 14.0 | 14.5 | 20.5 |
| 18. | Personnel Development | 15.0 | 13.0 | 20.5 |
| 19. | Leadership Development | 25.0 | 28.0 | 22.0 |
| 20. | Teacher Involvement in Supplementary Activities | 18.5 | 27.0 | 23.5 |
| 21. | Quantity, Quality, and Diversity of Personnel | 28.5 | 26.0 | 26.5 |
| 22. | Preservice Preparation | 24.0 | 21.0 | 25.0 |
| 23. | Equal Educational Opportunities | 26.0 | 24.0 | 26.5 |
| 24. | Vocational Guidance | 2.0 | 1.0 | 2.5 |
| 25. | Reducing Dropout, Absenteeism, and Tardiness | 20.0 | 16.0 | 10.5 |
| 26. | Coping with Social Problems | 27.0 | 29.0 | 29.0 |
| 27. | Accessible Guidance Services | 11.0 | 7.0 | 10.5 |
| 28. | Transition from School to Work | 9.5 | 19.5 | 17.0 |
| 29. | Job Placement | 4.0 | 5.5 | 4.0 |
| 30. | Follow-up | 23.0 | 9.5 | 17.0 |

*Less than 15 percent. **Between 15 percent and 30 percent. ***More than 30 percent

## Summary of the Unique Priorities

The following statements summarize the unique features of the needs in different types of large cities. The findings are presented in descending order of educational significance.

1. Cities with a minority level above 30 percent experience more intense vocational education needs than either cities with a minority level between 30 and 15 percent or cities with a minority level below 15 percent.

2. The vocational education priorities for cities with different minority levels are highly similar.

3. Although moderately strong correlations exist among the priorities of all types of large cities studied, the greatest patterns of differences occur among cities in different geographic locations. Vocational education priorities are the least similar between cities in North Central and Western United States; North Central and Northeastern United States; and Northeastern and Southern United States.

4. The overall magnitude of the need for urban vocational education programs is significantly higher in the South than in the Northeast. The magnitude of need is also greater in North Central than Northeastern United States, and slightly higher in the South than in the West.

5. No significant differences in the intensity of need were found among cities of different size. However, the level of need is higher in both cities with between 200,000 and 500,000 residents and cities with over 500,000 residents than in cities with less than 200,000 residents.

6. The least correlation in the ranking of the needs by city size was found between medium and large cities. There is moderately strong agreement between the types of needs experienced in small and medium cities.

## V. USE OF THE RESULTS

The results of the National Large Cities Vocational Education Needs Study can be used for many purposes and at various levels of decision-making and program implementation. It is hoped that this nationwide information base about the needs in large urban vocational education programs will be useful at the national, regional, state, and local levels.

The information is useful at the national level:

1. To influence resource allocation priorities for federal legislation and funds.
2. To influence the preparation of planning documents and requests for proposals.
3. To identify areas of concern which require research or development by national and regional centers and laboratories.
4. To guide the activities of national professional associations.

The information also is useful at the local, state, and regional levels:

1. To communicate a more compelling picture of the vocational education needs to the governing boards of vocational education and community members.
2. To determine high priority areas of need to emphasize in planning documents and responses to proposals.
3. To revise, develop, and/or validate program objectives for vocational education.
4. To increase accountability in the program planning process.
5. To provide data to justify application of resources to some needs and not to others.
6. To establish criteria for evaluating local programs.

## BIBLIOGRAPHY


Adams, Kay A. "The National Large Cities Vocational Education Needs Study," Ph. D. dissertation. The Ohio State University, 1976.

Bins, Milton; Healas, Donald V.; and Hobbs, Addison. "The Role of Vocational Education in Large Cities." Papers presented at the National Leadership Development Seminar for State Directors of Vocational Education, Snowmass-Aspen, Colorado. September 23-26, 1975.

Blake, Duane L. *Short Term Institutes for Inservice Training of Professional Personnel Responsible for Vocational-Technical Education in Western Metropolitan Areas.* Final Report, Fort Collins, Colorado: Colorado State University. April 1972, p. 1-3.

Center for Vocational Education, The. *Priority Problems in Vocational Education for the Nation's Big Cities.* Research Training Institute, Denver, Colorado, December 5-9, 1966.

Center for Vocational Education, The. *Program Area Statements and Summaries.* Columbus, Ohio: The Center for Vocational Education, The Ohio State University, December 1970 (revised 1976).

Council of the Great City Schools. *Occupational Education in the Great Cities.* Chicago, Illinois, 1968.

Evans, Rupert N. (Chairman) Committee on Vocational Education Research and Development. *Assessing Vocational Education R & D.* Washington, D.C., 1976.

Ellis, M. L. *A Report to the Nation on Vocational Education.* Flagstaff, Arizona: Northern Arizona University, November 1975. Prepared for Project Baseline.

Grasso, J. T. *The Contributions of Vocational Education, Training, and Work Experience to the Early Career Achievements of Young Men.* Columbus, Ohio: Center for Human Resource Research, The Ohio State University, July 1975.

Holden, Pamela J. *Review of the Literature: Needs Assessment.* Dallas, Texas: Department of Research, Evaluation and Information Systems, March 1975.

Hummel, Raymond C. and Nagle, John M. *Urban Education in America: Problems and Perspectives.* New York: Oxford University Press, 1973.

Jenkins, Marie. *A Correlation Between Methodologies for Ranking Educational Needs.* Masters thesis, The Ohio State University, 1975.

Kaufman, R. A. *Educational System Planning.* Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1972.

Kaufman, Jacob and Schaefer, Carl. *The Role of the Secondary School in Preparing Youth for Employment.* Pennsylvania State University, 1967.

Koble, Daniel E., Jr. and Adams, Kay A. "Identifying Needs for Big City Vocational Education Programs." *American Vocational Journal,* April 1976.

Koble, Daniel E., Jr. and Newton, Mark. "Developing the Leadership Potential of Urban Vocational Education Administrators." Report of the National Leadership Seminar for Administrators of Vocational Education in Large Cities, Columbus, Ohio, March 28-31, 1976.

Lange, Robert R. *The National Needs Assessment of the National Center of Educational Media and Materials for the Handicapped.* Continuation Proposal submitted to the Bureau of Education for the Handicapped, DHEW, USOE, September 1, 1974.

Lee, Arthur M. *Learning a Living Across the Nation.* Volume III. Prepared for the National Advisory Council on Vocational Education. Flagstaff, Arizona: Northern Arizona University, November 1974.

Mason, William R. *Report of a National Seminar on the Scope of the Responsibilities of Vocational Education in Large Cities.* Cleveland, Ohio, 1969.

McCracken, J. D. and Gillespie, W. B. *Information Needs of Local Administrators of Vocational Education.* Columbus, Ohio: The Center for Vocational Education, The Ohio State University, March 1973.

Morrison, Edward J. *National Survey of Vocational Education Needs.* Columbus, Ohio: The Center for Vocational Education, The Ohio State University (to be published).

National Advisory Council on Vocational Education. *Report on Urban Vocational Education.* Washington, D.C., December 1974.

Olivo, C. Thomas. "Short Term Institutes for Inservice Training of Professional Persons Responsible for Vocational-Technical Education in Eastern Metropolitan Areas," Temple University, April 1969.

Riles, Wilson C. (Chairman). *The Urban Education Task Force Report.* New York: Praeger Publishers, 1970.

*Time.* "The Crime Wave." June 30, 1975, pp. 10-11.

U.S. Bureau of the Census. *Statistical Abstracts of the United States: 1975.* 96th edition. Washington, D.C., 1975.

*U.S. News and World Report.* "Cities in Peril." April 7, 1975, pp. 43-46.

*U.S. News and World Report.* "Are All Big Cities Doomed?" April 5, 1976, p. 51.

U.S. Office of Education, Department of Health, Education, and Welfare, Bureau of Occuaptional and Adult Education. *Vocational Education in Major Cities.* Washington, D.C., December 1972.

Witkins, Belle Ruth. *An Analysis of Needs Assessment Techniques for Educational Planning at State, Intermediate, and District Levels.* Hayward, California: Alameda County Superintendent of Schools, May 1975.

## APPENDIX

### Population of Large Cities for the Mail Surveys

Cities with 100,000 Residents or More

Akron, OH
Albany, NY
Albuquerque, NM
Alexandria, VA
Allentown, PA
Amarillo, TX
Anaheim, CA
Atlanta, GA
Austin, TX
Baltimore, MD
Baton Rouge, LA
Beaumont, TX
Berkeley, CA
Birmingham, AL
Boston, MA
Bridgeport, CT
Buffalo, NY
Cambridge, MA
Camden, NJ
Canton, OH
Cedar Rapids, IA
Charlotte, NC
Chattanooga, TN
Chicago, IL
Cincinnati, OH
Cleveland, OH
Colorado Springs, CO
Columbia, SC
Columbus, GA
Columbus, OH
Corpus Christi, TX
Dallas, TX
Dayton, OH
Dearborn, MI
Denver, CO
Des Moines, IA
Detroit, MI
Duluth, MN
Elizabeth, NJ
El Paso, TX
Erie, PA
Evansville, IN
Flint, MI
Fort Lauderdale, FL
Fort Wayne, IN
Fort Worth, TX
Fremont, CA
Fresno, CA
Garden Grove, CA
Gary, IN
Glendale, CA
Grand Rapids, MI
Greensboro, NC
Hammond, IN
Hampton, VA
Hartford, CT
Hialeah, FL
Hollywood, FL
Honolulu, HI
Houston, TX
Huntington Beach, CA
Huntsville, AL
Independence, MO
Indianapolis, IN
Jackson, MS
Jacksonville, FL
Jersey City, NJ
Kansas City, KS
Kansas City, MO
Knoxville, TN
Lansing, MI
Las Vegas, NV
Lexington, KY
Lincoln, NB
Little Rock, AR
Livonia, MI
Long Beach, CA
Los Angeles, CA
Louisville, KY
Lubbock, TX
Macon, GA
Madison, WI
Memphis, TN
Miami, FL
Milwaukee, WI
Minneapolis, MN
Mobile, AL
Montgomery, AL
Nashville-Davidson, TN
New Bedford, MA
New Haven, CT
New Orleans, LA
New York, NY
Bronx Borough
Brooklyn Borough
Manhattan Borough
Queens Borough
Richmond Borough
Newark, NJ
Newport News, VA
Norfolk, VA
Oakland, CA
Oklahoma City, OK
Omaha, NB
Parma, OH
Pasadena, CA
Paterson, NJ
Peoria, IL
Philadelphia, PA
Phoenix, AZ
Pittsburgh, PA
Portland, OR
Portsmouth, VA
Providence, RI
Raleigh, NC
Richmond, VA
Riverside, CA
Rochester, NY
Rockford, IL
Sacramento, CA
St. Louis, MO
St. Paul, MN
St. Petersburg, FL
Salt Lake City, UT
San Antonio, TX
San Bernardino, CA
San Diego, CA
San Francisco, CA
San Jose, CA
Santa Ana, CA
Savannah, GA
Scranton, PA
Seattle, WA
Shreveport, LA
South Bend, IN
Spokane, WA
Springfield, MA
Springfield, MO
Stamford, CT
Stockton, CA
Syracuse, NY
Tacoma, WA
Tampa, FL
Toledo, OH
Topeka, KS
Torrance, CA
Trenton, NJ
Tucson, AZ
Tulsa, OK
Virginia Beach, VA
Warren, MI
Washington, D.C.
Waterbury, CT
Wichita, KS
Winston-Salem, NC
Worcester, MA
Yonkers, NY
Youngstown, OH

Source: U.S. Bureau of the Census. *U.S. Census of Population: 1970, Number of Inhabitants,* PC(1)–A1 and *General Population Characteristics,* PC(1)–B1, final reports, *United States Summaries,* and *Area Measurement Reports,* series GE-20, No. 1.

Largest Cities in the States without a City of 100,000 or More

Cheyenne, WY
Billings, MT
Fargo, ND
Souix Fall, SD
Anchorage, AL
Huntington, WV
Burlington, VT
Wilmington, DE
Portland, ME
Manchester, NH
Boise, ID

## APPENDIX

### What the People Say: Selected Results from Personal Interviews

The information collected from personal interviews with parents, students, employers, educators, employment service personnel, and community leaders generally substantiated the findings from mail surveys of central office vocational educators. These interviews, as described earlier in the report, were conducted with 560 people from various backgrounds and roles. The interviews were often conducted informally. All were conducted by the same interviewer. The interview results presented in this section represent an attempt to synthesize information received from those outside of central office vocational education personnel. A synthesis and interpretation of this type is subject to the biases of the interpreter. Therefore, the information in this section should be viewed as a somewhat subjective interpretation of the rich pool of information which was collected.

Emphasis is placed on reporting findings which were either not reported or contradict the findings from mail surveys of central office vocational educators. The following findings are notable:

1. The basic attitude of most people toward vocational education in urban areas is very positive. This is especially true among vocational students and their parents.

2. School personnel interviewed felt they were serving only about 10-15 percent of the needs for part-time adult education in their communities.

3. There is a feeling among some top officials in city school systems that the major responsibility for conducting part-time adult vocational education programs belongs to post-secondary institutions. Some vocational educators share this belief.

4. A need exists for providing guidance services on an extension basis in order to serve adults who need educational counseling.

5. Urban public schools need to offer more simulated work experience programs to serve two purposes:

   A. To prepare students for placement in cooperative/work study programs,

   B. To serve students who for one reason or another do not have the opportunity to gain actual work experience.

6. There is an urgent need to develop annual and long-range master plans for vocational education in cities. Such plans should include:

   A. Resources needed to maintain and expand programs,

   B. Facilities needed,

C. Curriculum changes needed,

D. Manpower supply and demand,

E. Guidance programs needed,

F. Etc.

7. A feeling exists among professional educators that they are not adequately and equally represented on many statewide education and manpower committees. In many states 60-70 percent of the total population lives in urban areas, yet these school districts often comprise only a 10-20 percent portion of the membership. They feel it is unfair for such groups to determine standards and lay plans which affect the urban area.

8. There was a feeling that programs developed by state level personnel are often more adapted to the needs of rural and suburban schools than to those of the urban area. This is coupled with a need for more state staff with training and experience in dealing with problems of large city schools.

9. In many cities fewer than 20 percent of vocationally prepared students are willing to migrate outside the urban area to find adequate employment. Ways should be found to break down this provincialism.

10. The decentralization of supervisory and administrative functions in many cities has weakened vocational programs to a considerable degree. Many important curriculum and program decisions now are being made by local staff who may not be adequately prepared to do so. Often the professional staff in the central office are given service responsibilities, e.g., repairing broken equipment, ordering and delivering new equipment, processing administrative paperwork, evaluating marginal teachers, transporting students, etc. This is a waste of expensive talent. More responsibility for the planning of programs and establishment of program standards should be reinstated as a function of central office vocational staff. This is not meant to preclude the fact that a reasonable amount of program ownership must be maintained at the school building level.

11. A common complaint made by central office personnel was lack of time to supervise, lead, and direct vocational programs which may be, in part, an organizational and staffing problem. There is a need for organizational development coupled with a need to increase the number of persons assigned to vocational education in many major urban areas. A need also exists to place central office supervisory staffs on a twelve month working basis.